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Oscar Blasco* (oscar.blasco@uv.es), Departamento de Analisis Matematico, Universidad de Valencia, 46100 Burjassot, Valencia, Spain. *Dyadic BMO on the bidisc.*

We give several new characterizations of the dual of the dyadic Hardy space, the so-called dyadic *BMO* space in two variables and denoted. These include characterizations in terms of Haar multipliers, in terms of the “symmetrised paraproduct” Λ_b , in terms of the rectangular BMO norms of the iterated “sweeps”, and in terms of nested commutators with dyadic martingale transforms. We further explore the connection between dyadic *BMO* and John-Nirenberg type inequalities, and study a scale of rectangular BMO spaces.

(joint work with Sandra Pott (Glasgow University, UK)). (Received February 03, 2006)